

XVII. *Notes on the new or rare Sphingidæ in the Museum of the Royal Dublin Society, and Remarks on Mr. Butler's recent revision of the Family.* BY W. F. KIRBY, Assistant Naturalist, R.D.S.

[Read August 1st, 1877.]

THE Royal Dublin Society's collection now contains nearly 300 species of *Sphingidæ*, among which are several new species which I describe below. I have also taken this opportunity to mention the very few species or synonyms which are unnoticed by Mr. Butler in his recent revision of the group in *Trans. Zool. Soc.* ix., and to enumerate those species in the Dublin collection which are interesting from their rarity, or from their being at present unrepresented in the British Museum, for it is always useful to know in what other public collections the desiderata of our great National Museum may be examined.

#### MACROGLOSSINÆ.

*Hemaris Fuciformis*, Linn. (= *Sphinx Tityus*, Linn.; = *Sphinx Musca*, Retz.)

*H. Ruficaudis*, Kirb. (= *Hæmorrhagia Buffaloensis*, G. & R.; and *H. Uniformis*, Grote).

*H. Kingii*, Macl. (= *Cunninghami*, Boisd. nec Walk.) Australia.

Two specimens of this very distinct species.

*H. Cyaniris*, Guér.,  *Ic. R. Anim. texte.* ii. p. 495 (1844), *infra.* Sylhet, Mauritius.

*H. Croatica*, Esp. Dalmatia.

*Macroglossum Affictitia*, Butl. Ceylon.

„ *Vialis*, Butl. Hab. (?)

„ *Luteata*, Butl. Ceylon.

*Sphinx Pandora*, Fabr., is not quoted by Butler. Fabricius quotes *S. Passalus*, Drury, as a synonym, but his description appears to apply better to some species allied to *Belis*, Linn.: I will not attempt to

decide which. Butler seems to have also overlooked *Perigonia Passerina*, Boisd. Lep. Het. p. 327, hab. (?)

*Himantoides Undata*, Walk. Jamaica.

As this was described by Walker from a specimen wanting hind wings and abdomen, I have redescribed it below. The British Museum now possesses a perfect specimen, and I hope Mr. Butler will soon characterize this interesting genus from it.

*Proserpinus Gorgon*, Esp. S. Russia.

*Temnora Excisa*, Walk. Natal.

Described by Walker as an *Enyo*, and referred by Butler, with doubt, to the already sufficiently heterogeneous genus *Lophura*. It is evidently closely allied to *T. Rhadamistus*, Fabr., as figured by Boisduval. (*Temnora plagiata*, Walk.; = *Confusa*, Walk.; = *Dicanus*, Boisd. Voy. Deleg. ii. p. 594, n. 101 (1847).)

*Calliomma Pluto*, Fabr.; = *Sph. Pluto*, Gen. Ins. p. 274 (1777); Zschach, Mus. Lesk. p. 95, t. 3, n. 184 (1788); = *Sphinx Cræsus*, Dalm. Anal. Ent. p. 48, n. 22 (1823); = *Oreus Thorates*, Hübn.

The above is the correct synonymy of this well-known insect. *C. Pluto*, Cram., must retain Hübner's name of *Plutonium*.

*Enyo Gorgon*, Cram. Brazil.

„ *Lyctus*, Cram. Upper Amazons.

Three specimens, agreeing with the figures of Cramer and of Herrich-Schäffer. There are certainly at least two species represented, and I am at present inclined to regard *Lyctus*, H. S., as the ♂ of that of Cramer.

*Aleuron Butleri*, sp. n., infra. W. Indies.

#### CHÆROCAMPINÆ.

*Acosmeryx Miskini*, Murray. Australia.

Two specimens, one larger and darker than the other. *Enyo Cinnamomea*, H. S., mentioned by Butler, Trans. Zool. Soc. ix. p. 542, is probably an over-coloured figure of this, and would then take priority. *A. Miskini* stands as *A. Cinnamomea*, H. S., in the collection of Herr Maassen of Elberfeld, who considers *Daulis*, Boisd., to be also synonymous. The notice of *A. Naga*, Moore, Cat. Lep. É. I. C. i. p. 271, was, I am informed by Mr. Butler, accidentally erased in his MS.

*Otus Versicolor*, Harr. Canada.

A new locality for this rare species.

*Pergesa Castanea*, Moore. India.

*Panacra Ella*, Butl. Sylhet.

So much greener than the figure that I was about to describe it as distinct. We have a closely-allied species, perhaps *P. Testacea*, Walk., from the Andamans.

(*Diodosida Murina*, Walk. = *Lophura Tyrrhus*, Boisd. Voy. Deleg. ii. p. 594, n. 103 (1847).)

*Chærocampa Elpenor*, Linn. (= *Sph. Porcus*, Retz.)

„ *Capensis*, Linn. (= *Sph. 8-maculata*, Gmel.)

„ *Neoptolemus*, Cram. Colombia.

„ *Geryon*, Boisd. Hab.?

I cannot see any resemblance between this species and the figure of *Phænyx*, H. S., to which Snellen seems inclined to refer it.

*Chærocampa Saclavorum*, Boisd. Madagascar.

„ *Oldenlandiæ*, Fabr. (= *S. Argentata*, Haw. Ent. Trans. i. p. 334 (1812); *Deil. A.*, Steph. Ill. i. p. 130, n. (1828); Wood, Ind. Ent. Suppl. f. 28 (1839).)

Among other specimens are three labelled "Africa," which appear to belong to this species, and not to *Gordius*, Cram.

*Chærocampa Margarita*, n. sp., infra. Australia.

„ *Rosina*, Butl. Ceylon.

„ *Latreillii*, Macl. (= *Comminuens*, Walk.)

„ *Aspersata*, n. sp., infra. Andamans. (*C. Butus*, H. S., Ex. Schmett. ii. f. 559, probably = *C. Punctivenata*, Butl.)

„ *Alcides*, Boisd. Brazil.

I do not believe this species to be the same as *Anubus*, Cram., though Butler considers them identical. There are several closely-allied species of this group, including *C. Moeschleri*, Ersch. Trud. Russk. x. pl. 1, f. 1, intermediate between *Alcides* and *Maculator*. The true *Anubus*, though known to and described by Boisdual, does not appear to be contained in British collections. *C. Mexi-*

*cana*, Ersch. l. c. f. 2, is, as Mr. Butler informs me, synonymous with *C. Falco*, Walk.

*Charocampa Isaon*, Boisd. Cayenne.

„ *Maculator*, Boisd. Colombia.

„ *Tyndarus*, Boisd. Hab.?

A single bleached specimen.

*Charocampa Johanna*, n. sp., infra. Brisbane.

This species, with *Scrofa*, *Ignea*, *Brennus*, and *Yorkii*, forms a little group almost peculiar to Australia. Boisduval appears to have been in error in stating that he described *C. Yorkii* from the British Museum collection; but his description will no doubt be applied to the proper insect as soon as it is rediscovered. I see no reason to consider it a fictitious species. *C.?* *Ploetzi*, Möschl. Verh. z. b. Wien. xxvi. p. 350, pl. 4, f. 35, from Surinam, has been described since the publication of Butler's revision. In the same paper Möschler describes and figures *Tylognathus Carinatus*, Walk., and *T. Chloroptera?* Pert. (p. 349, pl. 4, ff. 33, 34).

*Charocampa Erotus*, Cram. v. *Andamanensis*, infra. Andamans.

*Deilephila Opheltes*, Cram. Cape.

A small specimen, measuring only  $2\frac{1}{2}$  inches in expanse; Cramer's figure is an inch larger. But all the *Deilephila* appear to vary considerably in size.

*Deilephila Zygophylli*, Ochs. S. Russia.

„ *Hippophaes*, Esp. (= *Amelia*, Feisth. Bull. Sci. Nat. 1827, p. 162).

*Daphnis Angustans*, Feld. Queensland; Brisbane.

Felder's specimens came from the Moluccas (Amboina, according to Boisduval).

*Philampelus Pandorus*, Hübn. (= *P. Ampelophaga*, Harr. Amer. J. Sci. xxxvi. p. 300, n. 4 (1839)).

„ *Lacordairei*, Boisd. Madagascar.

A single specimen. It appears to be distinct from *P. Mægæra*, Linn., but as the latter is evidently a very variable species, it would require a series of *Lacordairei* to point out the differences properly.

*Pachylia Lyncea*, Clem. Brazil, Amazon, Barbadoes.

*P. Undatifascia*, Butl., may be the same as this species.

*P. Inconspicua*, Walk. (?) Jamaica.

*Oryba Robusta*, Walk. Ucayali.

*Sphinx Achemenides*, Cram., is evidently closely allied to this species, which was placed by Boisduval in *Pachylia*, to which it is clearly related. A drawing of *O. Robusta* was lately sent me by Erschoff as *P. Kadeni*, Schauf., but I have not been able to consult the description of the latter.

#### AMBULICINÆ.

*Ambulyx Eurycles*, Herr Schöff. S. America.

„ *Lycidas*, Boisd. Brazil.

„ *Crethon*, Boisd. Hab. —?

#### SMERINTHINÆ.

*Metamimas Banksiæ*, Boisd. S. Australia.

*Polyptychus Timesius*, Stoll. N. China; India  
(= *Sph. Modesta*, Fabr., E. S. iii. 1, p. 356, n. 4  
(1793)).

The legs of this species are very thick and strongly spined.

The earliest notice of *Lophostethus Dumolinii* is by Latreille, Cuvier's *Regne Animal*, ed. 2, vol. iii. pl. 20, f. 1. (1830), as *Sphinx Dumolin*.

*Calasymbolus Astylus*, Dru. N. America.

*Smerinthus Ocellata*, Linn. (= *Sph. Semipavo*,  
Retz.)

„ *Tatarinovii*, Brem. (= *Smer. Eversmanni*,  
Popoff, Bull. Mosc. 1854, ii. p. 182, pl. i.  
f. 5).

*Basiana Exusta*, Butl. Cashmir.

Walker quotes a record that his *B. Postica*, from Natal, “gives out sounds resembling those of a *Lamia*, for minutes together.”

#### ACHERONTINÆ.

*Acherontia Medusa*, var. Malacca.

Resembles Japanese rather than Chinese examples, and is as dark as these above and below. The inner black band of u. s. h. w. sends off a very distinct branch near the costa to the discoidal spot.

*Acherontia Sculda*, n. s., infra. Borneo.

## SPHINGINÆ.

*Amphonyx Rivularis*, Butl. Upper Amazons; Mexico.

The Mexican specimen is much larger than any of the others.

*Anceryx Alope*, Dru. (? Cram.) (= *Sphinx Flavicans*, Goeze, Ent. Beytr. iii. 2, p. 216, n. 44 (1780)).

*Isognathus Menechus*, Boisd. Brazil.

*Dilophonota Merianæ*, Grote. Colombia.

*Macrosila Lefebvrei*, Guér. (= *Incisa*, Walk.) Brazil.

*Protoparce Dalica*, n. s., infra. Canada.

„ *Cingulata*, Fabr. (= *Sphinx Affinis*, Goeze).

„ *Quinquemaculatus*, Haw. (= *Celeus*, Hübn.)

„ *Sexta*, Johannsen (= *Carolina*, Linn.).

The Am. Ac. vi. and Mus. Utr. are both dated 1764; but as Linné quotes the former, its priority is established.

*P. Abadonna*, Fabr. Queensland.

This is a species measuring  $3\frac{1}{4}$  inches across, and resembling a small *Convolvuli*, from which it may be at once distinguished by the absence of the rosy spots on the abdomen. It is well described by Macleay as *Sphinx Godarti*, in King's Australia, and I therefore consider a further notice superfluous. It agrees better with *S. Abadonna*, Fabr., than any other species known to me; and the locality of the latter (East Indies) is also sufficiently near.

*P. Pseudoconvolvuli*, Schauf.

Small pale *Convolvuli* from Natal and Abyssinia may perhaps be identical with Schaufuss' insect.

*Diludia Pamphilius*, Cram. Upper Amazons.

A pair of what I believe to be this species. It seems to be intermediate between *Brontes*, Dru., and *Lichenea*, Walk.

*Diludia Bethia*, n. s., infra. Queensland.

„ *Nebulosa*, Butl. Sikkim.

(*Hylœicus Dynæus*, Hübn. Zutr. ff. 463, 464, appears to have been overlooked by Mr. Butler.)



*Sphinx Luscitiosa*, Clem.? N. America.

Does not quite agree with Strecker's figure.

(*Sphinx Snelleni*, Weyenb. Mus. Teyl. ii. p. 261, t. 34, ff. 9, 9a. I have copied an incorrect reference to this fossil species into the Zool. Record as *S. Snelli*.)

The following five *Sphinges* are not noticed by Butler:

*S. Pagana*, Fabr. Sp. Ins. ii. p. 146, n. 29. (The type should be in the Banksian collection.)  
E. Indies.

*S. Jasmini*, Boisd. Lep. Het. i. p. 114. Madagascar.

*S. Orneus*, Westw. Cab. Or. Ent. t. 6, f. 3. India.

*S. Sanguinosa*, Martyn, Psyche, t. 26, ff. 68, 69.  
Tranquebar.

*S. Argentiflua*, Mart. l. c. t. 29, ff. 83, 84. S. America.

*Nephele Cœnopion*, Hübn. Madagascar.

„ *Densoi*, Kef. Madagascar.

Allied to *Variegata*, Butl., but with more regular markings. I am uncertain whether or not this is the insect described by Boisduval, Faun. Mad. p. 75, as *Deilephila Morpheus*, Cram.

*Nephele Charoba*, n. s., infra. Madagascar.

„ *Argentifera*, Walk. Natal.

„ *Infernalis*, sp. n., infra. Ashanti.

„ *Vau*, Walk. Ambriz, Congo.

Differs a good deal in colour; the hind wings are sometimes greenish, with a dusky border, and sometimes more or less suffused with reddish on the outer half. The pale portions of the fore wings have a delicate bloom on them, similar to that often seen on bred specimens of *Smerinthus Populi*.

#### DESCRIPTIONS OF NEW SPECIES.

##### *Hemaris Cyaniris*, Guér.

Exp. al. 2 in. Allied to *H. Hylas*, Linn.; antennæ and wings as in *Hylas*; thorax and opaque portion of base of wing more olive-green, abdomen duller, slightly inclining towards reddish, anal tuft reddish, yellow at the base beneath, and with a blackish spot at the base on each side. Under-surface, including the legs, and the base of the wings yellow, inclining to orange.

Sylhet. Maassen in mus.; Mauritius, Guérin. Our specimen is erroneously labelled Brazil. I am indebted to Prof. Westwood for the identification of this species.

The uniform coloration of the under-surface, the absence of any belt on the abdomen, and the colour of the anal tuft will at once separate this from any other species of the *Hylas* group.

*Himantoides Undata*, Walk.

Exp. al.  $1\frac{1}{2}$  in. Body brown, with two darker bands at the base of the abdomen. Fore wings banded with paler and darker bands, varying in intensity, and sometimes broken into spots. A white dot at the base, followed by a short black dash; a small black discoidal spot, generally containing another white dot. Hind wings rounded, black, with the centre luteous, widening out from the anal angle to the costa; fringes of hind wings luteous. Underside of fore wings brown, with a triangular luteous spot near the base; hind wings more or less luteous, costa and hind margin brown.

Jamaica. Two specimens.

*Aleuron Butleri*.

Exp. al.  $2\frac{1}{2}$  in. Allied to *Iphis*, Walk., and *Ypanemæ*, Boisd. Shape of *Iphis*, but the angle of the fore wings somewhat more obtuse. Fore wings pale brown, with a black dot at the base near the costa, and just beyond it, a large greenish-brown spot, enclosing a white dot on the costa. A broad band of the same colour, but paler across the middle of the wing, curving towards the base, and somewhat produced in this direction along the inner margin; upon this is placed a triangular silvery discoidal spot, and a dot above it. Outside the band is a dark line, angulated parallel with the hind margin. Hind wings pale brown, with a suffused black stripe across the middle, and a dusky line beyond it, corresponding to that on the fore wings. Hind margin bordered with brown towards the front angle. Underside paler, with a slight reddish tinge, and two dusky lines running across both wings.

West Indies. One damaged specimen.

*Chærocampa Margarita*.

Exp. al.  $2\frac{1}{4}$  in. Allied to *Oldenlandiæ*, Fabr., and *Intersecta*, Butl. Thorax and abdomen greenish-brown,



thorax with a broad grey central stripe, silvery stripes at the bases of the fore wings, and intermediate gilded stripes. Abdomen with one central silvery stripe and two slightly gilded lateral stripes. Fore wings nearly as in *Oldenlandiæ*; a broad pearly-white stripe running from the middle of the inner margin to the tip, broadly edged with brown within and more narrowly without. Basal portion of the wing greyish and the marginal portion whitish, the latter intersected by three obsolete lines; the broad stripe is also intersected by one, on the inner side, as in *Oldenlandiæ*. Hind wings blackish, pale towards the base, and with a pale stripe parallel with the hind margin. Underside as in small specimens of *Oldenlandiæ*, but redder.

Queensland. One specimen.

The single stripe on the abdomen will distinguish this species from *Oldenlandiæ*, and the broad pearly stripe of the fore wings from *Intersecta*. There is an unnamed specimen in the Brit. Mus. coll.

#### *Chærocampa Aspersata*.

Exp. al.  $3\frac{1}{2}$  in. Allied to *C. Clotho*, Dru., and *Gonograptæ*, Butl. Body and hind wings as in *Clotho*, fore wings brown, varied with paler, and dusted all over with blackish scales; hind margin obscurely dusky. Outer line placed as in *C. Clotho*, between this and the black discal dot is a broader dusky line, suddenly angulated on reaching the costa. Underside of all the wings pale, speckled all over with dusky, with a broad dusky line running across them, corresponding to the one above, but extending nearly across the hind wings. Within this line the fore wings are much darker, except along the costa. The outer line and dusky hind margin are also faintly indicated on the underside of the fore wings.

Andamans. One specimen. (Mr. Butler considers this to be only a dark variety of *C. Clotho*.)

#### *Chærocampa Johanna*.

Exp. al.  $2\frac{1}{4}$  in. Allied to *Brennus*, Cram., and *Igneæ*, Butl., fore wings purplish-brown, with a broad darker central stripe bifurcated on the costa. A broad sub-marginal band of the same colour, the lower part interrupted by a large pinkish spot. Towards the base are some short dusky markings. Hind wings red, with brown hind margins as in *Igneæ*. Underside yellowish-red, the hind margins dusky, and a dusky stripe across the hind wings, and three dusky marks on the outer half of the

costa. Thorax and abdomen rosy-grey, the sides of the latter with four red belts, broadly interrupted in the middle above; and with a patch of silvery scales, mixed with reddish ones, on each side, giving the appearance of four elongated silvery spots on each side of the hinder part of the abdomen.

Brisbane. One specimen.

*Chærocampa Erotus*, Cram., var. *Andamanensis*.

Exp. al.  $3\frac{1}{4}$ — $3\frac{1}{2}$  in. Resembles var. *Erotoides*, Wallengr., but the hind margin of the fore wings is paler and more distinctly separated off by an obsolete blackish line, and the black border of the hind wings is a little broader. Underside yellowish, paler than in *Erotoides*, except towards base of fore wings; the whole surface dusted with black. Hind margins of both wings browner, following the outlines of the borders of the upper side and partly edged on fore wings by a black line running from the tip. One specimen has red hind wings above, and the underside of all the wings dull red, dusted with black, the hind margins shaped as in the others, but of a more purplish tint.

Body as in *Erotoides*; in the red specimen as in *Erotus*.  
Andaman Islands. Three specimens.

*Acherontia Sculda*.

Exp. al.  $4\frac{3}{4}$  in. Fore wings nearly as in *Medusa*, Butl., but less strongly dusted with grey; a reddish space along the middle of the inner margin. Hind wings straw-colour, hind margin black, with yellow spots between the nervures on the outside, but much smaller than in any other species; a narrow black line within, curving towards the anal angle. Head and thorax as in *Medusa*, a large black spot on each cheek of the skull. Abdomen with a very broad central bluish-black stripe, covering nearly the whole abdomen towards the extremity; a broad black band on each segment, broadest below, where it occupies as much space as the yellow, except just towards the tip. Underside of fore wings yellow, with a black border, and two obsolete transverse black lines, wider apart than in *Medusa*; hind wings nearly as in *Atropos*.

Borneo. One specimen.

Intermediate between *Atropos* and *Medusa*, but apparently distinct from both.

*Protoparce Dalica*.

Exp. nearly  $4\frac{1}{2}$  in. Allied to *Rustica*, Fabr., but the wings longer and narrower in proportion. Fore wings brown, slightly dusted with grey, crossed with irregular darker obsolete lines. Base and hind margin mottled with whitish, a triangular whitish blotch on the costa, surmounting a discoidal spot of the same colour; and another white blotch near the tip. Hind wings dark brown, greyish along the nervures, giving the wing the appearance of being crossed by two obscure greyish bands. All the fringes spotted with black and white. Body nearly as in *P. Rustica*. Underside of fore wings uniform brown, the discoidal spot indicated, yellowish. Outside this are two obscure darker transverse lines. Hind wings whitish at base, and rather more dusted with grey than the fore wings. Two transverse lines, more distinct than those on the fore wings, the outermost on the hind wings corresponding to the innermost on the fore wings.

Canada. One specimen.

*Diludia Bethia*.

Exp.  $3\frac{3}{4}$ — $4\frac{1}{2}$  in. Allied to *Casuarinæ*, Walk. Fore wings dusted with whitish-grey, fringes spotted with black. Three more or less conspicuous darker stripes (sometimes nearly obsolete), one within and one without the black discoidal spot, the former considerably angulated; the third runs from the inner margin at two-thirds from the base to the hind margin below the tip. From the tip runs a very conspicuous black line, like a black thread, nearly to the discoidal spot. Hind wings black, anal angle grey, fringes white. Underside greyish-white, more or less clouded with brown. Antennæ white above, brown beneath. Thorax greyish-white, with two black dots behind. Abdomen brown, dusted with grey, and with indications of a dark subapical, and broader lateral stripes. Underside uniform whitish-grey.

Queensland. Four specimens.

*Nephele Charoba*.

Exp.  $3\frac{1}{4}$  in. Allied to *Densoi*, Kef.; fore wings uniform, silky brown, the hind margin marked off less broadly than in *Densoi* by a narrow greyish stripe, edged within with black. A silvery discoidal crescent; an

obscure blackish mark runs from it towards the anal angle. Hind wings tinged with greenish, hind margins darker; fore wings beneath brown at base, with the discoidal spot small, yellow; the marginal portion of the wing is darker than the space within it, and is marked off by a blackish line running from the tip. Hind wings paler than the fore wings; hind margin also marked off with a dark line. Body brown above, grey below; sides of thorax and orbits grey; first three segments of abdomen grey at the sides, each with a large black spot.

Madagascar. One specimen.

Another specimen, probably a variety, has the fore wings darker above and the hind wings more greenish; the discoidal spot is reduced to an inconspicuous dot, and the abdomen is uniformly spotted along its whole length; the underside is also darker, the hind margins are less distinctly separated, and there are two dark transverse lines on each wing, obsolete in the other specimen.

*Nephele Infernalis.*

Exp. about 3 in. Closely allied to the last; very dark smoky green; fore wings with a minute white discoidal dot; hind wings shading into black towards the hind margins. Even the usual marginal line of fore wings only indicated in one specimen by an obscure row of grey scales. Underside paler brown, inclining to greenish, especially towards base of hind wings. Fore wings with a transverse dark line on disk, and the usual marginal line running from tip; hind wings with two transverse lines. Thorax very dark green; abdomen nearly as in the last species, but uniform greenish-black above.

Ashanti. Two specimens.